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# GOVERNOR KNOWLES STATE FOREST

## Master Plan

CONCEPT ELEMENT



Approved by  
Natural Resources Board

NOV 17 1988

Date

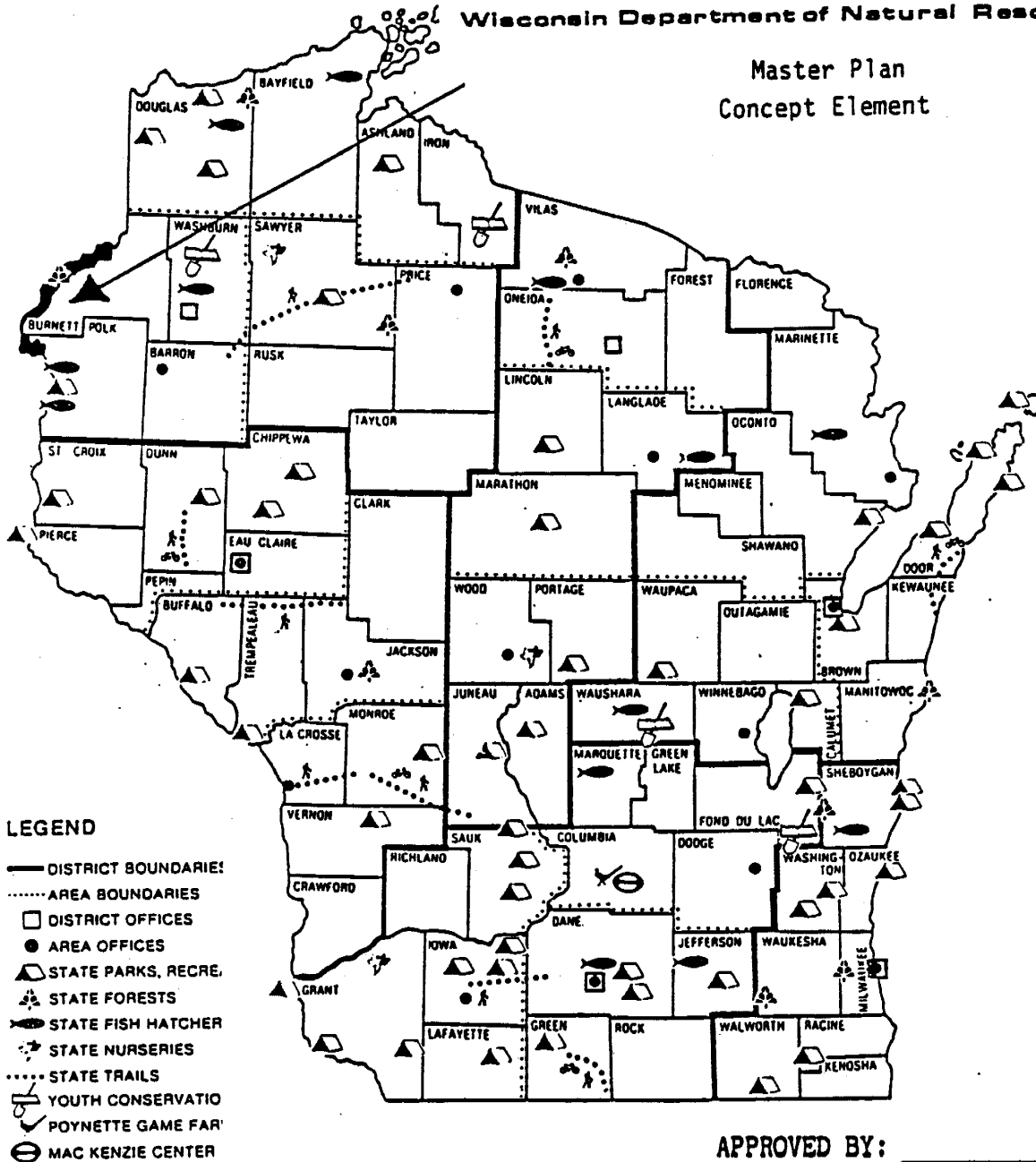


# STATE LOCATION MAP

## GOVERNOR KNOWLES STATE FOREST

Wisconsin Department of Natural Resources

Master Plan  
Concept Element



APPROVED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

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## I. GOALS, OBJECTIVES, ADDITIONAL BENEFITS

### GOAL

To protect, perpetuate and manage the natural resources of the property, to provide recreational opportunities for the general public, and to manage the timber resource providing forest products, consistent with the objectives of the St. Croix National Scenic Riverway.

### OBJECTIVES

1. Maintain a 7,348 acre Wilderness Area and 1,706 acres of Natural Areas, which complement the 2,984 acre Maximum Preservation Zone of the St. Croix National Scenic Riverway.
2. Make available the recreational resources of the forest (in addition to fish and wildlife) for public use and enjoyment for approximately 50,000 participant days per year.
3. Manage the land and associated wildlife to achieve varied habitat types and produce wildlife to provide 18,000 participant days of wildlife related activities annually.
4. Manage the fishery resource to provide opportunities for 2,700 participant days of fishing annually.
5. Manage the forest resource, consistent with the multiple use concept, providing a sustained yield flow of forest products by harvesting 4,000 to 5,000 cords equivalent annually.
6. Acquire approximately 300 acres of private land per year until the acquisition goal of 26,513 acres is reached.

### ADDITIONAL BENEFITS

Maintain the aesthetic qualities of the forest and provide for approximately 4,000 visitor days of use for sightseeing, berry picking, bird watching and nature study.

Provide up to 500 cords of firewood annually utilizing non-commercial wood and timber sale residues.

Provide 4,000 visitor days of wildlife observation.

## II. RECOMMENDED MANAGEMENT & DEVELOPMENT PROGRAMS.

### RECREATION

A major reason for establishment of the Governor Knowles State Forest was to provide resource protection and recreation in conjunction with the St. Croix National Scenic Riverway, which is administered by the National Park Service. Recreation on the Riverway is naturally focused on canoeing, boating and primitive camping. On the state forest, emphasis has been placed on land-based extensive type activities such as hiking, snowmobiling and horseback riding. The linear shape of the Forest lends itself to development of recreational trails for these activities.

Limiting factors in development of additional recreational facilities are land ownership, funding for development and maintenance, and user demand. Many areas within state forest boundaries have fragmented state ownership, which prohibits development that may be desired. Budgets do not always allow for needed developments or maintenance of new facilities. Thirdly, recreation needs must be assessed before a facility is constructed.

#### 1. EXISTING FACILITIES

##### a. Multi-use Trail, 26 miles

Before the forest was established, horseback riding and snowmobiling had been taking place for several years within what are now state forest boundaries. In order to provide for these activities a multiple use trail has been developed in the southern half of the forest. The current trail connects with the Polk County Snowmobile Trail near Wolf Creek and connects with the Burnett County Snowmobile Trail, just south of Grantsburg. Winter trail maintenance will be done through contract with private vendor whenever possible.

##### b. Hiking Trails, 44 miles

Two hiking trails currently exist on the state forest. They are each about 22 miles long with one on the northern end of the forest and the other on the southern end. The trails will be cleared of windfalls and brush as necessary to comply with the Trails Specifications Handbook.

##### c. Brandt Pines Cross Country Ski Trail, 10 miles

The Brandt Pines Cross Country Ski Trail is located about seven miles northwest of Grantsburg. It is 10 miles long with both one way and two way trails, and a ski shelter on the trail. It is groomed during the ski season and maintained by state forest personnel. Part of this trail is on National Park Service land as a result of a cooperative agreement.



d. Sioux Portage Group Campground, 36 campers

The Sioux Portage Group Campground is located six miles southwest of Danbury. The site is suitable for up to 36 people with rustic tent camping only, and is run on a reservation basis.

e. Highway "70" Wayside

A state forest wayside picnic area is on the south side of State Highway "70" near the River. Picnic tables, toilets and water are provided.

f. St. Croix National Scenic Riverway

Visitor information and interpretation relating to the St. Croix National Scenic Riverway is provided by National Park Service personnel at the visitor information center operated by the National Park Service. The information center is located on Highway 70 on the west side of the St. Croix River in Minnesota.

g. Canoeing

Canoeing is one of the major attractions of the St. Croix River and it is accessible at numerous landings along the river. The National Park Service has developed and maintained the following landings: Norway Point, Nelson, Fox, Soderbeck, Highway 70, Raspberry Landing, County "O" Landing and Sunrise Ferry.

2. PROPOSED DEVELOPMENTS

a. Recreational Use Survey

A survey will be conducted to determine demand for intensive recreational facilities.

b. Family Campground

If a recreational needs survey warrants, and funding is available, a family campground near Highway 70 would be developed. Facilities would include picnic tables, fire rings, well, pit toilets, hiking trail to the river, parking lot and access road.

c. Equestrian Day Use

Horseback riding and camping by equestrians are customary activities on the southern part of the Forest. The camping has been taking place for many years on a site formerly owned by Northern States Power. This site was recently acquired by the state forest. A day use activity area is initially proposed. It would include a well, toilets, picnic tables and facilities for horses. Design and layout would be such that in the future it could be converted to a 30-40 unit group type campground.

d. Bridle Trail

A bridle trail is proposed for development to provide access from the planned day-use area to the multi-use trail.

e. Group Campground

Currently the Sioux Portage Group Campground is available for tent camping only. An area to accommodate camping with motor homes and trailers is proposed. It would be separate from the tent camping area, which would not be accessible to vehicles. This campground is about 300 feet from the river. A foot trail from the campground to the river needs development. This would allow groups canoeing the river to use the campground. Use would continue to be on a reservation basis. The National Park Service will be contacted concerning placement of a sign.

f. Brandt Pines Ski Trail

Currently, the ski trails total ten miles in length. Half of this is two-way. The addition of a three to five mile loop would provide a longer trail and allow for one-way trail use on most of the system.

g. Hiking Trail

Northern Segment-the south terminus is currently at Fox Landing. The ski trail is within a quarter mile of the hiking trail. Development of a link between the two would extend the amount of trail available for hiking.

Eventually, it is planned to extend the hiking trail southward to join the southern segment and have a continuous trail the length of the Forest. This will basically depend upon acquisition of private in-holdings to provide contiguous state ownership.

h. Highway 70 Bridge

The bridge on State Highway 70, across the St. Croix River is scheduled for replacement. Formal contact will be made with the Department of Transportation to encourage the inclusion of a recreational lane on the bridge to accommodate traffic between the State Forest and Park Service information office.

i. Off-Road Recreational Vehicle Use (ORV)

Current regulations do not permit unlicensed vehicles to be operated on the state forest. It is proposed that we work with the counties to designate sections of our trails which would complement their ATV trail system.

j. Storage Building

Construct a cold storage area of approximately 1,000 square feet. This will meet the needs of the state forest for storage facilities and relieve overcrowding of existing facilities belonging to other functions.

k. Facilities for the Handicapped

Existing recreational facilities are undergoing evaluation for their suitability for use by the physically handicapped. Appropriate modifications will be made, particularly at the group campground and Highway 70 Wayside, to make them accessible to all.

Future recreational facilities development will be designed to include accommodations for use by the physically handicapped.

## WILDLIFE MANAGEMENT

Manage the land and associated wildlife to achieve varied habitat types and produce wildlife for public use and enjoyment. Provide 22,000 participant days of wildlife related activities annually, including 4,000 visitor days of Wildlife Observation.

### 1. Maintain Productive Forest Wildlife Habitat

Shade intolerant (sun loving) tree species with their associated grasses and forbs provide excellent habitat for forest wildlife species such as deer, ruffed grouse, woodcock, bear, snowshoe hare, and squirrels. Oak, aspen, jack pine and grassy openings are very productive of forest wildlife and should be maintained. Guidelines have been established to ensure that these important wildlife habitat types are maintained at or above a certain minimum level.

That portion of the State Forest above the escarpment has been divided into five "game habitat units". The habitat goal in each game habitat unit will be to maintain a minimum of sixty-five percent of the forest acreage in intolerant forest types, in order to carry a fall population of 30 deer or more per square mile of habitat. When the frequency of occurrence of any of the intolerant forest types is below the recommended guideline (Table 1) it is considered a "critical type". Specific stands of critical type required to maintain diversity or wildlife abundance become "critical stands". The management objective is to identify and seek to maintain all critical stands.

TABLE 1

#### FOREST HABITAT GUIDELINES

Intolerant Forest Types	Recommended Compositional Guidelines	Current Forest Composition
Oak	20%	43%
Aspen	30%	6%
Grass & Upland Brush	4%	3%
Jack Pine	<u>15%</u>	<u>14%</u>
	65%	66%

In most cases normal forest management practices will be employed to encourage and maintain intolerant forest types, and to ensure cutting at the normal rotation age. Oak can also be maintained by clearcutting, but a longer than normal rotation is beneficial to forest wildlife species. Jack pine, when cut and regenerated naturally, provides optimum winter deer habitat. Planting jack pine is a second alternative to maintaining winter deer cover.

Forest openings, an important component of summer deer habitat, will be inventoried and maintained.

Large snag trees and trees with natural cavities will be maintained whenever practical to favor cavity nesting birds and mammals such as the gray squirrel, flying squirrel, and raccoon.

## 2. Maintain Winter Deer Yard Habitat

A minimum of 15 percent of the forest will be maintained in conifer types that provide deer winter cover. Wintering deer utilize jack pine as well as swamp conifers like white cedar and black spruce. Jack pine managed on a short rotation and regenerated naturally provides excellent year round deer habitat. Jack pine stands are used heavily by wintering deer when snow depths exceed 12 inches. Planting jack pine stock will be necessary where natural regeneration is inadequate. White cedar and black spruce are difficult to regenerate naturally. Management opportunities for white cedar and black spruce will be limited since much of the bottom lands will be in the Wilderness Zone.

The previously designated 4049 acre Kohler-Peet Wildlife Area (Appendix, Map II) was incorporated into the newly created St. Croix River State Forest in 1970. In order to carry out the objectives for which Kohler-Peet was acquired, a management plan which included both wildlife and forestry interests, was written and became part of the original St. Croix River State Forest Master Plan. In the past, Kohler-Peet was the most important wintering area for deer in western Burnett County. Deer utilized the swamp conifers below the escarpment as well as the jack pine on the uplands. Kohler-Peet today is still an important deer wintering area. In recent years, wintering deer have tended to use jack pine cover more than the bottomland white cedar or black spruce, which have deteriorated in quality.

Jack pine regeneration will be given special emphasis on Kohler-Peet in order to maintain the traditional deer wintering habitat. Planting jack pine stock will be necessary where natural regeneration fails. High quality summer deer habitat will be emphasized by maintaining and regenerating existing stands of oak and aspen, and by protecting grassy openings. Management opportunities below the escarpment will be limited since the majority of the bottomlands are Wilderness or Natural Area zones.

## 3. Sharp-tailed Grouse Management

The St. Croix Barrens Sharptail Area (Appendix, Map II) is an 845 acre unit that is being intensively managed for sharp-tailed grouse. The Barrens is a remnant of the original brush-prairie that covered much of western Burnett County prior to settlement about 1850. A wildfire in 1959 maintained the Barrens as prairie habitat, and sharptails have continued to use the area although populations have gradually declined as the oak brush matured.

Recent management has included firebreak construction and prescribed burning. The management area is divided into six burn units which will be burned at 3 to 5 year intervals. Food plots and dancing grounds will be established. A portion of the sharptail management unit is classed as Natural Area and is managed in accordance with the approved Natural Area Management Plan.

4. Endangered and Threatened Species

Endangered or threatened species will receive special protection. Forest management practices around bald eagle and osprey nests will be modified as required by Manual Code 1724.5 to protect the nest and reduce disturbance during the nesting season. Informal surveys will document the occurrence of endangered or threatened plant and animal species. Breeding bird surveys will be conducted on Natural Areas.

5. Wildlife-Related Recreation

Wildlife resources on the state forest generate recreational opportunities which are measured in 'participant days' of use on the property (Table 2). Deer hunting provides the most wildlife related recreation on the state forest, followed by small game hunting and wildlife observation.

TABLE 2

WILDLIFE RELATED RECREATION

Deer Hunting (Gun & Bow)	8000 participant days
Small Game Hunting (Squirrels Ruffed Grouse, Woodcock, Snowshoe Hare)	5500 participant days
Wildlife Observation and Photography	4000 participant days
Furbearer Hunting and Trapping (Coyote, Fox, Raccoon, Bobcat)	3000 participant days
Bear Hunting (includes dog training)	1000 participant days
Waterfowl Hunting	<u>500 participant days</u>
TOTAL	22,000 participant days

## FISH MANAGEMENT

The fishery resource in the Governor Knowles State Forest is limited primarily to streams. There are two lakes within the forest boundary; Clam River Flowage north of County Highway F and Bluff Lake.

A total of nine small brook trout streams are found within the boundary of the forest. These streams are characterized by having small base flows and extremely cold water temperature. These streams have sufficient natural reproduction to sustain populations of wild brook trout at or near carrying capacity. The brook trout fisheries in these streams are dominated by abundant populations of fish under six inches.

Wolf Creek is a brook and brown trout stream with a lower gradient and larger base flow than the streams mentioned above. Trade River in the forest provides a marginal brown trout fishery with no natural reproduction.

Recommended management procedures for the trout streams in the forest are as follows:

- A more detailed inventory of all the trout streams and spring areas in the forest should be made to determine the fishery resource.

- Manage for minimum beaver populations along the entire stream length. This can be done by encouraging beaver trapping and limiting regeneration of aspen along the trout streams.

- Provide developed walk-in access to these small trout streams.

- Continue to supplement the trout fishery in Wolf Creek by stocking of brown trout.

- Continue to maintain the trout fishery in the Trade River by annual stocking of brown trout.

The fishery in the Clam River Flowage has maintained itself without stocking since 1954. Fishing quality in the flowage is considered to be better than average for panfish and northern pike. Recommended management for the flowage is to conduct periodic surveys to determine if natural reproduction and recruitment is adequate to maintain a desirable fishery.

Bluff Lake is within the forest boundary but the shoreline around the lake is in private ownership. A public access to Bluff Lake will be developed when land is purchased along the lakeshore. When access is developed a complete inventory of the fishery will be conducted to determine the fishery resource.

Sections of the following warmwater streams run through the forest:  
1) Clam River, 2) Iron Creek, 3) Wood River, and 4) Trade River. Clam, Wood, and Trade Rivers provide a limited sport fishery. Field surveys should be made periodically to monitor any changes in the species composition of the fish community with special emphasis on the rough fish populations in the rivers.

## FOREST MANAGEMENT

The objectives of the forest management program are to:

Provide a sustained yield flow of forest products; increase the quality and quantity of timber produced annually; provide and maintain a timber base which complements other uses including recreation, fish and wildlife management activities; and implement an active forest protection program.

The forest is managed based on a system called Compartment Reconnaissance. This consists of inventorying individual stands of timber and prescribing management activities to be undertaken which are best suited for those timber types. The information gathered for each compartment is then computerized and used to determine where each year's activities will take place. These activities include timber harvest, reforestation and timber stand improvement. To maintain a sustained flow of forest products and reduce fluctuations in the workload the forester strives for a regulated forest. A fully regulated forest complements aesthetics and wildlife objectives by providing a variety of timber types and age classes. At present, age classes on the forest are quite unregulated due to past harvesting activities and wild fires. A regulated forest is one in which there is an even acreage distribution of age classes by timber type. Ideally, this allows for the same amount of acreage to be harvested each year. While a fully regulated forest is seldom achieved, it is the ideal towards which the forester works.

### 1. Management Activities

Aesthetic management is practiced on the forest and is guided by the Silvicultural and Forest Aesthetic Handbook #2431.5 and Natural Resources Board Policy 1.24. The forest is divided into three zones with differing levels of aesthetic management.

The A Zone consists of those areas immediately adjacent to streams and roads receiving heavy use by the public. This zone requires the most intensive application of aesthetic management practices and consists of only selective or salvage cutting to prevent degradation of the timber and scenic beauty adjacent to these high use areas. Scenic roads are listed in Table 9, Page 30.

The B Zone includes those areas along roads receiving light use and are managed with modified logging activity to limit the aesthetic impact.

The C Zone includes the rest of the forest. It is managed using sound silvicultural practices and multiple use concepts.

Big tree silviculture is an aesthetic management technique designed to provide a maximum of large size trees on the managed areas of the forest. It is applicable to those tree species which are long-lived. These include Red and White Pine, Red and White Oak on good sites and Northern Hardwoods. The rotation age is extended to biological maturity rather than economic maturity.



Timber harvests will be conducted using either all-aged or even-aged management of the various timber types depending upon the biological need of the stand. All-aged management is applied to a stand that includes individual trees of all age classes. It consists of periodically removing trees from a stand selectively to provide sunlight and room for additional growth and seedling establishment. Even-aged management is applied to a stand in which all trees are approximately the same age. It is used to perpetuate timber types that need large amounts of sunlight to reproduce and maintain vigor. Intermediate thinnings may be applied, through selective cutting, removing surplus trees that would otherwise be suppressed. Clear-cutting is the primary means by which an even-aged stand is regenerated. Reforestation is required for some timber types to insure adequate stocking. Annual timber harvests will be conducted based on resource need with an expected annual harvest of 250 acres per year for the next 10 years. Approximately 75% of the annual harvest will be even-aged management of oak, aspen, and pine. The remaining 25% of the annual harvest will be all-aged management of northern hardwood timber types.

Reforestation will be applied to timber types that will not regenerate naturally. Current planting projects consist of interplanting poorly stocked oak stands, replanting harvested jack pine stands and planting non-forested areas acquired through land acquisition. In many cases some type of site preparation is required to insure adequate regeneration. Site preparation involves removal of competing vegetation and/or exposing mineral soil for a seed bed. This can be accomplished using herbicides or by mechanical means. Current site preparation is accomplished by a patch scarifier which creates small spots free of competing vegetation where the trees are then hand planted. This type of site preparation usually follows a timber harvest which has removed all the trees. The majority of planting has been either jack pine or red pine. Other species which are well suited to a particular site and show promise of good growth may be used.

Although herbicides have not been used, limited use is an effective way to accomplish some of the vegetative management work needed. The use and application will be in conformance with Manual Code 4231 and the label instructions as approved by the U.S. Environmental Protection agency. The methods of application under consideration are backpack mist blowers, tree injection, granule application by hand, and ground sprayer application.

Good land management practices are complicated due to the lack of monumented survey corners. In areas of the State Forest where 100% acquisition is unlikely efforts will need to be made to establish section and quarter section corners. The county surveyor has established some corners where private landowners have documented a need. Additional corners need to be monumented to allow forest management activities to continue and to reduce the potential for trespass problems.

## 2. Forest Protection

### a. Fire Control

The property is located in an area of predominately pine-oak forests where the potential for wildfire often exists. Department of Natural Resources fire control personnel stationed at both Grantsburg and Webster have the primary responsibility for prevention, detection, and suppression of all forest fires on the property. Wildfires have historically occurred in the area and at times have become very large and quite destructive. In light of this potential, fire management concerns are an integral part of the overall property management.

Resource management on the forest will be conducted in such a manner as to minimize the risk and spread of wildfire. This may include suspending mechanized equipment use in high risk areas, during extreme fire danger. Timber sale contracts will include specifications for the treatment of timber sale residue to minimize or reduce the fuel load. These requirements will be enforced by state forest personnel.

Fire management concerns will be a consideration in the property reforestation program, from species and site selection, to planning fire access lanes in new plantations. Alternatives to pine conversion will be considered in locations that warrant it.

A joint effort will also be made between fire control and state forest personnel to consider and deal with fire related concerns during the planning and implementation of recreational developments on the property.

Prescribed burning has been and will in the future be periodically conducted on the state forest to achieve land management goals. This, as with other projects, will be handled as a coordinated effort between functions.

Fire prevention is an ongoing effort on the property in several ways, some of which include the posting of fire prevention messages at numerous locations. The sign boards at various locations also serve as posting sites for emergency forest fire regulations when they are in effect.

### b. Forest Pest Control

The forest insect and disease program is made up of three segments: detection, prevention, and suppression. Detection is accomplished by systematic and scheduled surveys, and continuous awareness and observation by forestry staff members during the course of their normal work. The District Entomologist assists in identifying problems and prescribing actions on the forest. Prevention is accomplished by silvicultural practices which encourage growth of strong, vigorous trees that have a higher resistance than defective or decadent trees. Suppression of insect pests by chemical means would only be used under exceptional situations and in compliance with Manual Code 4230.3.

c. Endangered and Threatened Plants

Very little is known about endangered or threatened plants in the forest because no systematic survey has been conducted. Because of the unique ecosystem below the escarpment it would be likely that plants uncommon to the area may be found there. Most of these areas are in the Wilderness Zone and will be protected by that land use classification. If State Forest personnel suspect the existence of endangered or threatened plant species within a proposed development area, the District Endangered Species Coordinator will be contacted and appropriate protection measures taken, pending a definitive conclusion.

## LAND ACQUISITION

The gross acreage within the state forest boundary is 32,595. However, the acquisition goal established by the Natural Resources Board is 26,513. The 412 foot acquisition zone of the National Park Service is not a part of the 26,513 acres.

Current state ownership is 18,635.26 acres (see Appendix Map III). An additional 70.95 acres are under easement.

Land acquisition in fee title will continue at an estimated rate of 300 acres per year, assuming adequate funding and land availability. Purchases are made from willing sellers at fair market values.

Only properties within the established project boundaries will be considered for acquisition. An exception to this would be where a landowner owns property partially in and partially outside the project and would only sell as one unit.

Payments in lieu of taxes will continue to be made by the state to the townships for state lands owned within the township boundaries. The payment in lieu of taxes on land purchased by the state after July 1, 1969, is based on the local assessment made following the acquisition multiplied by the county, local, and school tax rate levied for that year. The payment will be 100% the first year and decreases by 10% each year to 10% or 50 cents per acre whichever is greater at the end of 10 years. Properties purchased before July 1, 1969 are paid at a rate of 80 cents per acre. All payments go directly to the townships. The loss of property value and tax dollars that go to the school districts are usually offset by the state nearly dollar for dollar through increased state school aids.

### III. SUPPORT DATA

#### BACKGROUND

##### 1. History

Public law 90-542, 90th Congress, S119 enacted October 2, 1968 establishes national policy to preserve "in free flowing condition and to protect the immediate environments for the benefit and enjoyment of present and future generations, certain rivers of the nation which possess remarkable scenic, recreational, geologic, fish and wildlife, historical, cultural or other similar values". Among the rivers designated for such protection is that portion of the St. Croix River between the dam near St. Croix Falls, Wisconsin upstream to the dam near Gordon, Wisconsin, and its tributary the Namekagon River from Lake Namekagon downstream to its confluence with the St. Croix.

The "Rivers" bill, as this legislation has come to be known, required a cooperative agreement between Northern States Power Company and the federal government (National Park Service). The company agreed to convey without charge, its interest in 100 acres per mile of its river frontage land and to use, manage, and develop lands retained, in a manner complimentary to and consistent with the purposes of the act. Pursuant to agreements reached in accordance with these stated provisions, Northern States Power agreed to donate 4100 acres of their lands to the State of Wisconsin. These lands were adjacent to those donated to the Park Service. Such donation to be contingent on the establishment of a State Forest. The St. Croix River State Forest was established by action of the Wisconsin Natural Resources Board in August of 1970. In 1982 the forest was renamed the Governor Knowles State Forest recognizing former Governor Warren Knowles for his active involvement in conservation issues and the outdoor recreation program.

Coordination of the entire river project among the various agencies involved is achieved through the St. Croix Management Commission, which is composed of a representative each from the Minnesota and Wisconsin Departments of Natural Resources, the National Park Service, and the Northern States Power Company. The Commission acts on all matters in regard to planning and management. It meets periodically to review progress and approve recommended management and development.

##### 2. Administration

Wisconsin Statutes, Chapter 28, specifically defines the state forests and regulates their management. The boundaries of the state forests are defined in Wisconsin Administrative Code NR 40. Natural Resource Board policy NR 1.24 is established for "management of state and county forests".

The following Department handbooks establish procedures for the various programs on the state forest:

TABLE 3

DNR HANDBOOKS

Timber Sales	2461
Silvicultural and Forest Aesthetics	2431.5
Forest Compartment Reconnaissance	2412
Public Lands Forestry Records	2405.1
Endangered and Nongame Species	1724.5
Land Acquisition and Sales	2205
Law Enforcement	4105
Trail Specifications	2450.5
Signs	8672.05
Recreation Area Operations and Maintenance Standards	2205.1

The forest is administered under line control of the Northwest District through the Cumberland Area Forester to the Forest Superintendent.

3. Management

The majority of the management activities on this forest were initially directed toward recreation due to past use and its association with the St. Croix River. As acquisition has brought more forest land under the ownership of the state, forest management has become a prominent activity. As indicated in Appendix VI, the first timber sales were conducted in 1978.

The recreational facilities identified for development in the initial Master Plan, are nearly complete with the exception of the family campground. A group campground was constructed and has been operating since 1983. The recreational trails are nearly complete and have been operational for the past 5-10 years.

Wildlife related recreation has continued to be high, with hunting as a primary use. Management to enhance the wildlife habitat is being accomplished by regulating the forest cover types.

The state forest visitor and resource protection programs will be significantly enhanced through cooperation with the other state and local law enforcement agencies. Open lines of communication and a positive cooperative attitude will be maintained with local conservation wardens, forest rangers, local sheriff's department and the National Park Service personnel.

Law enforcement on the forest will be administered under applicable sections of Wisconsin Statutes (Table 4) and Chapter 45 of the Natural Resources Administrative Code. The primary responsibility for enforcement on the forest shall lie with the Forest Superintendent.

This does not exclude state or local agencies that have concurrent jurisdiction. The Department of Natural Resources Law Enforcement Handbook 4105 will identify enforcement procedures to be used in dealing with routine patrol and disturbances. Additional bureau,

district, area and forest policies will help guide the law enforcement effort on the forest.

TABLE 4

WISCONSIN STATE STATUTES

Conservation	Chapter 23
Protection of forest lands and forest productivity	Chapter 26
Public parks and places of recreation	Chapter 27
Public forests	Chapter 28





## RESOURCE CAPABILITY AND INVENTORY

### 1. Soils and Geology

The valley of the St. Croix, which is quite broad, resulted when Glacial Lake Duluth (a predecessor to Lake Superior) was temporarily blocked from running eastward and drained out through the Brule River and St. Croix Lake.

The major portion of the area (19,000 acres) which was surveyed on the Wisconsin side is classified as a sandy, outwash plain, and includes soils of the Nymore, Omega, and Friendship series. These soils are generally described as sandy, highly permeable, with low fertility, and low water holding capacity. From a development standpoint these soils are fairly good for recreational areas. Problems are the maintenance of good turf, and instability of the soil when dry and under heavy wheel loads. There are 3,520 acres abutting the river which are classified as Alluvial soils. These areas are subject to occasional or frequent flooding.

Most of the land in the area between the foot of the valley and the "brink" is classified as either terrace escarpments, seepage land, or stoney land. There are 6,800 acres in these three types. The Terrace escarpments is a soil type that extends in an almost unbroken line through the survey area on the Wisconsin side. It is characterized by 18 to 45% slopes, is of sandy material, sometimes underlain with loamy or clay material. The lower slopes have springs and seeps. This soil type is difficult to develop and manage. The Seepage land is on 2-12% slopes at the foot of the escarpments and has variable type soils. It is the source of many springs. It is poorly suited for recreational development. The Stoney land is on the higher parts of the flood plain. The soil is moderately well drained, loamy, and stones and boulders make up 35-70% of the soil body. It has low value for recreational developments. Many springs and small streams have their source in this soil area.

### 2. Vegetative Cover

There has not been a radical change of the timber types between the original cover at the start of the logging era within the State Forest - boundary and the present. Originally, the area of the brink and the slopes down into the flats along the river had considerable old growth large pine mixed with the bottomland hardwoods. On the sandy plains, periodic fires of natural origin served to maintain stands of jack pine, scrub oak, and red pine in mixture with brushy or prairie-like openings of varying size. There were some small, scattered types of aspen and white birch near the brink area or in high water table areas.

At the present time, the sandy plains are covered with jack pine and scrub oak. Most of the land which was cleared has reverted back to jack pine through natural regeneration or has been planted to red pine and jack pine.

Following is a list of forest type acreages on state-owned land in the forest. They do not include acreage classified as Wilderness Areas.

TABLE 5

FOREST TYPE ACRES

White Pine	71
Red Pine	424
Jack Pine	1513
Fir-Spruce	51
Swamp Conifer	493
Tamarack	34
Northern Hardwoods	482
Oak	4754
Swamp Hardwoods	1613
Aspen	782
Grass	237
Brush	282
Non-Forest Area	372

11,108

These acres are taken from our current compartment reconnaissance data. Major "forest types" are identified for management purposes and will often be mixed with several different species in minor quantities.

The brink slope area remains much the same as it did before the logging era. The large pine and hardwoods are gone and have been replaced with younger red and white pine, northern hardwoods, and swamp hardwoods. The swamps are forested with cedar, fir, spruce, and tamarack. About 40% of this area is classified as upland timber types, 40% lowland timber types and 20% non-forested lowland areas.

### 3. Wildlife Resources

Intolerant forest habitat types produce a great variety of wildlife species on the state forest. The oak-jack pine forest is highly productive of white tailed deer. Other forest wildlife mammals include black bear, coyote, red fox, gray fox, bobcat, raccoon, striped skunk, snowshoe hare, gray squirrel, red squirrel, woodchuck, and porcupine. Small mammals include the long tailed shrew, water shrew, giant mole shrew, common mole, star-nosed mole, little brown and silver-haired bats, striped ground squirrel, eastern and least chipmunks, northern flying squirrel, deer mouse, white footed mouse, red-backed vole, meadow vole, woodland jumping mouse, and short-tailed and long-tailed weasels.

Other furbearers primarily associated with the St. Croix River and wetlands include beaver, otter, mink, and muskrat.

A study by the U.S. Fish and Wildlife Service (1981) documented 305 species of birds in the St. Croix River Valley. A study currently being conducted by the National Park Service lists 288 bird species

along the St. Croix River. Nearly 260 bird species have been sighted on Crex Meadows Wildlife Area. It is probable that most of the species documented on these three bird lists also inhabit the Governor Knowles State Forest either as summer residents, winter residents or spring/fall migrants. Resident species include 24 species of warblers, red shouldered hawk, broad-winged hawk, great horned owl and barred owl, ruffed grouse, woodcock, sharp-tailed grouse, whip-poor-will, pileated woodpecker, black-backed woodpecker, six thrush species, fourteen sparrow species, rose-breasted grosbeak, and indigo bunting.

The St. Croix Barrens Natural Area and Sharp-tailed Grouse Management Area provides an open, brush-prairie habitat. Wildlife species inhabiting the Barrens include sharp-tailed grouse, common yellowthroat, rufous-sided towhee, clay-colored sparrow, chestnut-sided warbler, pocket gopher, badger, and Franklin's ground squirrel.

Reptiles and amphibians found on the state forest include tiger and blue-spotted salamanders, American toad, wood frog, chorus frog, leopard frog, green frog, eastern gray treefrog, Cope's treefrog, painted turtle, map turtle, spiny softshell turtle, five-lined skink, prairie skink, hognose snake, smooth green snake, fox snake, bullsnake, eastern garter snake, red-bellied snake, and northern water snake.

Several endangered and threatened species inhabit the state forest. Bald eagles and ospreys are commonly seen along the St. Croix River and on the property, although no nests have been found within the project boundaries. The wood turtle is a resident of the St. Croix River and the adjacent forests. The timber wolf is a transient species on the state forest, occasionally wandering in from Douglas County or Minnesota.

Threatened species include red-shouldered hawk and Blanding's turtle, both resident species. The Cooper's hawk is a regular migrant and a rare nesting species on Governor Knowles State Forest.

An occasional moose is seen on or in the vicinity of the forest. They are likely transients that have wandered into the area from northeastern Minnesota. Fishers are currently expanding their range and have been reported at the north end of the state forest.

#### 4. Fish Resource

A total of 39 different species of fish inhabit the waters within the Governor Knowles State Forest (Appendix V). Brook and Brown trout are the primary species sought by anglers in the streams.

Northern pike and panfish provide the major warm water fishery on the forest.

The gilt darter and a female brook lamprey were collected in the Wood River within the state forest. The gilt darter is on the Wisconsin Threatened Species List and may become endangered. Prior to the collection of the brook lamprey, this species northernmost range was

reported to be in southern Missouri. The southern brook lamprey is a candidate for state listing and is predicted to occur in other streams within the project area.

The following species with special status have been found in the upper St. Croix River:

Cumberlandia monodonta (spectacle case mussel), proposed endangered.  
Cycleptus elongatus (blue sucker), threatened  
Acipenser fulvescens (lake sturgeon), special concern  
Moxostoma Carinatum (river redhorse), special concern  
M. valenciennes (greater redhorse), special concern  
Notropis anogenus (pugnose shiner), special concern

TABLE 6

TROUT STREAMS

<u>Water</u>	<u>County</u>	<u>Species</u>	<u>Class</u>	<u>Length in Miles**</u>
Bear Brook	Burnett	Brook Trout	I	0.5
Benson Brook	Burnett	Brook Trout	I	1.4
Brant Brook	Burnett	Brook Trout	I	0.4
East Brook	Burnett	Brook Trout	I	0.3
Ekdall Brook	Burnett	Brook Trout	I	0.5
Kettle Brook	Burnett	Brook Trout	I	0.4
Lagoon Creek	Polk	Brook Trout	II	1.5
Pine Brook	Burnett	Brook Trout	I	0.4
Sioux Portage Creek	Burnett	Brook Trout	I	0.6
Trade River	Polk	Brown Trout	III	2.5*
Wolf Creek	Polk	Brown Trout		
		Brook Trout I		.5*

\* Trade River is approximately 14.0 in length and Wolf River is 3.2 miles in total length.

\*\* This is the length of the stream in the Fish Management Area.

A more detailed description of trout streams crossing the forest boundaries follows:

Bear Brook T39N, R19W, Section 10 to T39N, R19W, Section 4

A small spring feeder stream flowing into the St. Croix River. It has a good population of brook trout although they are small in size. The only access is by way of a private trail.

Benson Brook T37N, R20W, Section 3 to T37N, R20W, Section 4

An excellent brook trout stream flowing into the St. Croix River. This sand, gravel, and rock bottomed stream originates in a large swamp and has good water quality. The lower area of the stream,

below where the town road crosses, is mostly fresh meadow with a few scattered tag alder. The only access is where the town road crosses the creek.

Brant Brook T39N, R19W, Section 16

A small, cold water feeder flowing into the St. Croix River. It is considered to be a brook trout stream.

East Brook T39N, R19W, Section 29

A small, spring feeder which flows west into the St. Croix River. It is a brook trout stream with no access road to it.

Ekdall Brook T39N, R19W, Section 1 to T40N, R19W, Section 35

A small, spring feeder which flows into the St. Croix River. It is considered to be a brook trout stream. It has a steep gradient. It is accessible from a town road near its outlet to the St. Croix.

Kettle Brook T39N, R19W, Section 9

A spring water feeder to the St. Croix River. It is considered to be a brook trout stream.

Lagoon Creek T36N, R20W, Section 5 to T36N, R20W, Section 7

Flows southwest into the St. Croix River. Two artificial impoundments having 2 foot head dams serve as the headwaters of this stream. Fish species present along the stream include brook trout, northern pike, largemouth bass, and panfish. The lower portion of the stream is limited in trout habitat due to the adjoining 32 acres of tamarack swamp wetlands.

Pine Brook T39N, R19W, Section 32 to T38N, R19W, Section 6

A small, spring feeder stream to the St. Croix River. It is considered a brook trout stream. There is access from a town road crossing.

Sioux Portage Creek T40N, R17W, Section 9

A small, spring feeder stream flowing into the St. Croix River. It is considered to be a good quality brook trout stream. It is accessible off a town road.

Trade River T36N, R17W, Section 2 to T36N, R19W, Section 31

Flows generally west, partly through Burnett County into the St. Croix River. Three warm water lakes are situated on the stream, Long Trade, with an 11 foot head of water, and Trade and Round Lakes in Burnett County. Brown trout are present in the Trade River except in the length of the stream below the Long Trade Lake dam and the county line. Carp are present in problem numbers on the lower portion of the stream below Atlas. Eleven bridge access points are present on the river.

A section of the stream above Long Trade Lake has been fenced off to prevent bank erosion due to pasturing. Bank cover was also provided by tree planting. This work was done through the cooperative efforts of local farmers and the state's habitat improvement section to restore and preserve the streams trout habitat.

Wolf Creek      T36N, R19W, Section 12 to T35N, R19W, Section 4

Flows south into the St. Croix River. Two natural warm water lakes are situated on the stream, Roger and Wolf Lakes. Of the total stream length, six miles are considered trout water, having brown and a few brook trout. Siltation from pasture lands in the lower portion of these stream is gradually limiting trout habitat. Adequate access can be had at points where four bridges and one state highway bridge cross the stream.

A brief description of each warm water stream within/or crossing the Governor Knowles State Forest follows:

Clam River      T38N, R16W, Section 34 to T40N, R18W, Section 14

Flows northwest from Polk County into the St. Croix River. It has two impoundments, Lower Clam Lake and Clam River Flowage on it. It also flows through one natural lake, Upper Clam Lake. There are four feeder streams entering the river with only one, the North Fork of the Clam River, having any trout water. A wide variety of fish species inhabit the river with the most common being northern pike, largemouth bass, bluegill, perch, white sucker, common shiner, and creek chub. A variety of vegetation types covers the watershed and ranges from pastured upland to shrub swamp. Water levels are stable except for some flooding which occurs above Upper Clam Lake during periods of high runoff. The river bottom is predominantly sand with scattered areas of gravel and muck. Canoeing is possible on the entire river. A total of eight road bridges cross the river and there are accesses on Upper and Lower Clam Lakes.

Iron Creek      T39N, R18W, Section 5 to T40N, R18W, Section 30

Flows northwest into the St. Croix River. It is considered a minnow stream although there are a few brook trout present. Water quality is rather poor with relatively infertile, turbid, and acid water. As the name implies, the stream has limonite deposits all along the waters edge and wherever there is an eddy. It is accessible at one road crossing and 2.0 mile of frontage is in State of Wisconsin ownership.

Wood River      T38N, R17W, Section 35 to T38N, R20W, Section 24

Beginning in marshland in Polk County, it flows mostly west into the St. Croix River. Its fish inhabitants include northern pike, largemouth bass, bluegill, perch, rock bass, bullhead, carp, white sucker, redhorse, common shiner, creek chub and sculpin. There are four warm water lakes on the stream. Dunham Lake, Little Wood Lake, Wood Lake, and Memory Lake which has an 8 foot water control structure. The entire river, except for the lakes and impoundment, is not considered good fishing water with poor habitat, sandy bottom,

shallow water and excessive erosion. That portion of the river which lies between Memory Lake and Wood Lake contains carp in problem numbers. Four feeder streams enter the river with only one, Hay Creek, containing trout. Wood River is accessible at 20 road bridges and crossings and by navigable water from the lakes it flows through.

A brief description of Bluff Lake and the Clam River flowage is as follows:

Bluff Lake T40N, R17W, Sections 8, 9, 16

Surface Area - 50.6 acres, Maximum depth - 23 feet, M.P.A. - 25 ppm, Secchi Disk - 14 feet.

A soft water, seepage lake which is landlocked. Fish species present are northern pike, largemouth bass, yellow perch, bluegill, pumpkinseed and bullhead. There is no public frontage or public access.

Clam River Flowage T40N, R17W, 18W, Sections, Several

Surface Area - 516.5 acres, Maximum Depth - 28 feet, M.P.A. - 86 ppm, Secchi Disk - 6 feet.

A hard water, drainage impoundment on the Clam River. The outlet flow is approximately 210.7 cubic feet per second. It has a 35 foot water control structure on its outlet. The most common fish present are northern pike, largemouth bass, bluegill, black crappie, pumpkinseed and bullhead. Walleyes, channel catfish, rock sturgeon, perch, rock bass, white sucker, redhorse and bowfin are also present. Public frontage consists of 4.19 miles of State of Wisconsin Land Commission land and Burnett County forest land. There is a county owned public access.

5. Land Use Classifications

The entire forest is divided into various land use classifications which provide guidelines for management and use of the forest. These guidelines will be applied only to state owned land within the state forest boundary.

There are nine land use classifications designated. Five of these are categorized as "Resource Protection" areas, three as "Resource Development" areas, and one as "Intensive Recreation Development". These designations and acreages differ from those in the original Forest Master Plan published in 1973. The intervening years of management of the forest, have led to the conclusion that the proposed land use classifications and acreages are more realistic and practical than those originally published in 1973. Following is a list of classifications and acres designated:

TABLE 7

LAND USE CLASSIFICATIONS

<u>Resource Protection</u>	<u>Acres</u>
Wilderness Area	7348
* Federal Scenic Riverway	2984
Natural Area	1706
Historical & Archaeological Areas	55
Scenic Areas	1280
<u>Resource Development</u>	
Fisheries Management Area	136
Wildlife Management Area	560
Forest Production	18396
<u>Intensive Recreational Development</u>	130
Total Acres	32,595

- \* The acreages indicated are gross acres within the Forest Boundary. They include the 412 foot Maximum Preservation Zone of the National Park Service which is excluded from state forest acquisition.

Using the acres listed above, 12,038 acres are afforded maximum resource protection (Wilderness, Natural & National Park Service). This is 37% of the land within the forest boundary. Modified management will be applied to the scenic areas.

A map of the Wilderness Area and Natural Areas is in the Appendix, Map IV.

a. Resource Protection Area

Wilderness Area - A large roadless area where natural forces predominate and mankind's influence is minimal or where natural conditions may be restored at costs deemed warranted by the Board. Wilderness areas should be 3,000 acres or more; provide outstanding opportunities for solitude and a primitive natural type of recreation; they contain ecological, geological, or other features of scientific, scenic, or historical value.

One wilderness area is designated which runs the length of the state forest. The wilderness area will generally have the terrace escarpment (beginning of the steep slope down to the river basin) plus 200 feet inland as the boundary. When the escarpment is within the 412 foot Maximum Preservation Zone, the boundary will be 200 feet inland from the 412 foot line. The compartment reconnaissance type maps will be used to designate the official location. This area encompasses 7,348 acres.



Land in private ownership will not be directly affected by the following guidelines:

No timber harvesting or other manipulations of vegetation shall be permitted.

Vehicular travel is prohibited and existing undeveloped woods roads will be blocked. Exceptions are that existing developed public roads, and improved state forest roads listed in Table 8, will remain open. No regulation of private access roads and private road easements will be attempted. As private lands are acquired and the private roads are no longer needed they will be closed. The one mile segment of the multi-use (snowmobile) trail in Section 35 and 36, Town of Sterling, will continue to be maintained and used for that purpose. The ski trail, multi-use trail, and hiking trail will be inspected semi-annually and maintained by light mechanical equipment and hand crews.

TABLE 8

WILDERNESS AREA ROADS

<u>Wilderness Area Roads</u>	<u>Distance</u>	<u>Township</u>
State Highway 77	1000 feet	Swiss
Foxes Landing Road	2000 feet	West Marshland
Ferry Road (Soderbeck)	4000 feet	West Marshland
Tennessee Road	1300 feet	Grantsburg
Gravel Pit Road	3300 feet	Grantsburg
Raspberry Landing Road	700 feet	Grantsburg
Pleasant Prairie Rd (Powell)	1000 feet	Anderson
County Highway 'O'	1300 feet	Anderson
Ferry Drive (Sunrise)	6000 feet	Sterling

Extensive type recreational activities which do not require roads, trails, or other developments will be permitted. These include: hunting, fishing, trapping, hiking, and cross country skiing. Backpack camping is also allowed, but only by permit.

Fire suppression will be accomplished with the use of hand tools when it is practical. If the use of mechanized equipment is deemed necessary in the suppression effort prompt and full restoration of the site will be accomplished as soon after the fire as feasible.

Insect and disease control will be undertaken only if areas outside the zone are threatened.

Salvage of timber damaged or killed by natural disasters will be at the discretion of the Natural Resources Board.

Natural Areas - Described as tracts of land or water containing the best remaining examples of native biotic communities or other natural features including significant geological or archaeological features. They are natural areas of at least statewide significance, especially suited to research and designation as state areas.

Six areas have been designated which contain 1,706 acres.

Natural Area number 147 is named the Sterling Barrens. This area features a jack pine - Hills oak (bur oak) dry forest interspersed with barrens openings dominated by prairie grasses.

Natural Area number 148 is named the St. Croix River Swamp Hardwoods. This area features a range of forest types from mesic uplands adjacent to the St. Croix River through extensive, low swamp to droughty uplands on the sandy plain above the river valley.

Natural Area number 149 is named the Brant Brook Pines and Hardwood Forest. This area features the best pine stand within the State Forest. It encompasses about 34 acres of red pine dominant (10-22 inch DBH) with white pine.

Natural Area number 150 is named the Ekdall Brook Conifer Swamp. This area lies in a low terrace, between 1/4 and 3/4 mile wide, where the St. Croix River has meandered away from its steep escarpment.

Natural Area number 151 is named Kohler-Peet Swamp Hardwoods. This area encompasses five major lowland plant communities and a .3 mile reach of Iron Creek lying below the St. Croix River terrace escarpment just east of the Norway Point Landing.

Natural Area number 152 is named the St. Croix Barrens and Cedar Swamp. This area features nearly flat, sandy open barrens, extensive swamp types on a low river terrace, and about 1 mile of wooded river terrace escarpment, 70-80 feet high between the upland barrens and swamp.

The general guidelines for these natural areas are as follows:

Maintain the natural conditions by allowing natural, physical, and biological processes to continue with a minimum of human intervention.

Management designed to simulate natural forces which shaped the community are permitted, such as fire for prairie, barrens, and savanna types.

Development is limited to the extent required to facilitate research and education.

Federal Scenic River - In general, federal scenic river areas are defined as those rivers or sections of rivers that are free of impoundments, with shorelines or watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. The upper St. Croix meets this criteria well.

Although the river corridor is within the state forest boundary, it is in fact not a part of the state forest. It is under the control and administration of the National Park Service. The scenic river area is included here because designation of the St. Croix was a key factor in creation of the state forest.

The lands adjacent to the river itself are the most significant from the standpoint of visitor use. Therefore, these lands require the most stringent control. However, the lands adjacent to these controlled areas also require control to preclude intensive or inappropriate development or uses that would decrease the quality of the recreational experience. This suggests that two zones be identified as a means of carrying out the management objectives for the river. These zones are described as the "Maximum Preservation Zone" and the "Limited Development Zone".

The maximum preservation zone extends an average of 412 feet back from the river's edge on each side of the river. Within this zone, acquisition of property rights and removal of structures, except in incorporated areas, is the purview of the National Park Service.

The limited development zone extends an average of about 920 feet back from the boundary of the maximum preservation zone. In the limited development zone, where land-use control need not be so strict, property rights will be acquired to control development and permit land uses that are compatible with the purposes of the riverway. The types of controls used are fee acquisition, zoning, and easement. The state forest can acquire lands within this zone. The Park Service may, acquire easements where the state is unsuccessful.

The maximum preservation zone which is about 2,989 acres in size will be maintained in a natural condition with developments only at public access points and canoe campsites.

Historical and Archaeological Areas - A historical or archaeological area is defined as those lands containing buildings, sites, objects and related features which are significant in that they possess high value or quality in illustrating or interpreting the historical and archaeological heritage of Wisconsin and the nation.

Physical developments shall be limited to those necessary for achieving the objectives of maintaining authenticity, increasing their educational effectiveness, and enhancing their public attractiveness and compatible recreational use.

Sites or structures shall have adequate protection and be available to visitors with relative ease.

There are several sites currently designated for preservation, totalling 55 acres. The following actions will be taken concerning historical and archaeological sites:

- a. Any known archaeological sites on state forest land will be surveyed prior to management activities involving extensive ground surface alterations.
- b. Areas to be developed for major recreational facilities will be surveyed for archaeological features prior to development. If significant sites are discovered, they will be protected from disturbance.

- c. No archaeological or historical surveys will be conducted prior to timber harvesting activities.
- d. Qualified specialists will be contacted to conduct any surveys that are required.

Scenic Areas - A scenic area is defined as those lands and/or waters having unique aesthetic qualities, scenic beauty or distinctive landscapes. The intent of this class is to protect and maintain these characteristics to the greatest extent possible for public enjoyment. The scenic area classification shall be the same as Class A Scenic Management Zone, Silvicultural and Forest Aesthetics Handbook 2431.5.

TABLE 9

SCENIC ROADS

Scenic Roads

Highway 77	Tennessee Road
County Highway F	Highway 70
North River Road	River Road (Sec.19,25,30, T38N-R20W)
Norway Point Road	Anderson Road
Foxes Landing Road (to River)	County Highway 0
River Road (Sec. 2, T39N-R19W)	Evergreen Avenue
Ferry Road (Soderbeck)	

Total acreage of this classification is 1280.

b. Resources Development Areas

Fisheries and Wildlife Management Areas and Forest Production Areas permit the broadest spectrum of resource management activities and are in fact "multiple use areas".

Fisheries and Wildlife Management Areas

Defined as those lands and waters containing less than ideal natural conditions for the perpetuation and production of fish and wildlife but can be developed for high production through artificial means.

The following guidelines will be used:

Development projects formulated to improve selected species habitat will be consistent with resource capacity.

Management will be directed at perpetuating and, where necessary, reestablishing quality habitat for maximum production of a variety of species.

Forest fire control and pest control will be carried out as necessary.

Timber harvesting and planting will be limited to those necessary to maintain selected species.

Hunting, fishing, trapping, and other extensive recreational use will be allowed consistent with the limitations of the resource base.

The designated Fish Management Area is 136 acres, described as follows: sixty-six feet on each side of the trout streams within the state forest, but excluding those portions within the Wilderness and Natural Areas. The list of streams is on p. 21 of the plan.

The forest cover within this area will be managed to enhance the quality of these streams. Aspen will be discriminated against to discourage beaver activity.

The designated Wildlife Management Area is 560 acres of the St. Croix Barrens Sharptail Area. The balance of the St. Croix Barrens is 285 acre and is part of the St. Croix Barrens - Cedar Swamp Natural Area. This designated area is intensively managed for sharp-tailed grouse. Specific management is discussed on p. 6 of the plan.

#### Forest Production Areas.

Forest production areas are those lands which can best and most advantageously be managed for the production of forest products consistent with sustained yield principles. These areas contain most of the commercial forest land and provide most of the opportunities for management of timber, wildlife habitat, and dispersed recreation. The Forest Production area covers 18,396 acres.

Forest management activities will be carried out employing sound forestry methods. Forest protection activities will be those required to maintain forest production.

#### c. Intensive Recreation Development Areas.

Defined as those quality areas adaptable to heavy recreational use and in locations where active and intensive recreation developments are needed. They are that part of a department project where recreation facility developments will occur or are located now.

Outdoor recreation is a primary objective of the state forest.

### MANAGEMENT PROBLEMS

1. Public concern results when land management activities begin to be performed in areas where little if anything had been done in the past. This is probably due to the fact that this is a relatively new forest and there are a considerable number of private inholdings which have not been intensively managed for the past several decades.

2. Productive timber sale establishment is being threatened by the lack of survey monuments. Approximately half of the section and quarter-section survey markers do not exist or have not been registered with the County Surveyor's Office. Without known section and quarter-section markers, property lines cannot be established with any degree of accuracy.
3. Recreational activities which are not permitted, such as camping, off-road vehicle use and beer parties, along with illegal hunting and firewood theft, threaten the integrity of the Forest. These problems are further complicated by the large amount of other public land with different regulations adjoining the State Forest. The length of the Forest makes enforcement and educational activities more difficult.
4. The National Park Service and State Forest personnel frequently cover the same areas while on patrol, but because of the lack of radio contact, they cannot inform and help one another. A common radio frequency would enable the agencies to coordinate efforts.

## RECREATIONAL NEEDS AND JUSTIFICATION

The Governor Knowles State Forest is within a 1 1/2 hour drive of the metropolitan areas of Minneapolis-St. Paul and Duluth-Superior which have a combined population in excess of two million. Because of its proximity to population centers, the general area of western Burnett and Polk Counties has become a major recreation area. The primary attractions include the large public land holdings of the Glacial Lake Grantsburg Wildlife Area, St. Croix River National Scenic Riverway, Burnett and Polk County Forests, and the Governor Knowles State Forest. These public lands attract many hunters, trappers, canoers, anglers, horseback riders, cross-country skiers, snowmobilers, off-road vehicle users, and in general those seeking an outdoor related experience.

The State Forest currently provides for extensive type recreation. It can accommodate additional use with adequate facilities and enforcement. More intensive forms of recreation such as camping and day use areas need to be developed. At present the only family camping facilities are located at Memory Lake and Wild River Outfitters. Both are open field undeveloped type campsites with water and toilets. Camping is also permitted at a rest area on Crex Meadows during the fall to accommodate the hunters.

### Camping

Camping in the area has been relatively light except for major holiday weekends, probably because of the lack of a quality camping opportunity. Opinion polls and user surveys indicate that a well developed rustic type campground would be used during major holidays, opening weekends of fishing and hunting seasons, spring bird migrations and weekends of major community activities. We can also expect some camping by vacationers stopping in the area throughout the summer.

Horseback riders have been camping on land previously owned by Northern States Power for about 25 years. Since the State acquired the land in 1983 we have documented between 750-1250 camper days per year.

The need for a family campground and a horseback riders campground on the state forest should be determined by doing a "recreation needs" survey, conducted by an independent surveyor.

The Group Campground has not received significant use since it was opened in 1983. This lack of use can be partially attributed to the lack of vehicle camping as well as poor access to the St. Croix River. The site can accommodate vehicles and offer good access to the river with minimal development costs. The site is also suited to group camping by canoers and should be designated for that use.

### Hiking

Because of recent storms, fires, and high water areas, the hiking trail has not received heavy use. There are sections of the trail that have not been developed to hook up to major use areas. Because of past damages to the trail, high maintenance areas, and inadequate manpower, sections of the existing trail

have not been adequately kept open. More emphasis needs to be placed on maintenance of an already developed recreational facility.

#### Horseback Riding

The southern half of the State Forest is used heavily for horseback riding with minimal trail development. The majority of the approximately 3000 horseback riding user days takes place on town roads and on the multi-use trail. A system of trails to avoid riding the town roads needs to be developed providing a more enjoyable experience. A day use facility is needed to provide a parking area, water, picnic tables, fire rings, hitching posts, and toilets. The site should be designed to accommodate a campground for future expansion, although no camping would be permitted while it is designated a day-use area.

#### Cross-Country Skiing

Cross-country skiing has become a substantial recreational activity during the past ten years. In the area of the state forest we now have two major ski trails and two smaller trails. The present trail on the state forest receives moderate use which can be increased with the elimination of two-way trails and continued minimal grooming and maintenance.



### ANALYSIS OF ALTERNATIVES

When considering the alternatives available to the various programs on the forest it should be noted that Chapter 28 of the State Statutes directs the Department to act on the programs. Therefore, the impact of no action was not considered.

1. Recreation: At the present time there is no evidence of overuse or resource degradation, so continued maintenance and development would be recommended. A reduction in the present extensive recreational facilities would not serve the current needs or comply with the goal of the State Forest. An increase in resource protection areas would reduce the extensive recreational use if such areas had limited access.
2. Wildlife Management: With the large amount of other public lands and under current management practices, an increase in wildlife management activities would not substantially change existing wildlife populations. Intensive wildlife management is being conducted on adjoining public lands and a reduction of habitat management on the state forest would not significantly reduce wildlife populations in the area.
3. Fish Management: Because of the type of fisheries involved, little activity is planned and an increase or reduction would not involve significant savings or losses.
4. Timber Management: The present regulations, including manual codes, handbooks, and recon information, preclude any change in the timber harvest and reforestation programs. All harvests are based on allowable cuts determined by the species, age, and site. Therefore, an increase in the program is not recommended.

A reduction in this program could occur if resource protection areas were increased in size. There would be a negative impact on wildlife management, area economics, and forest income.

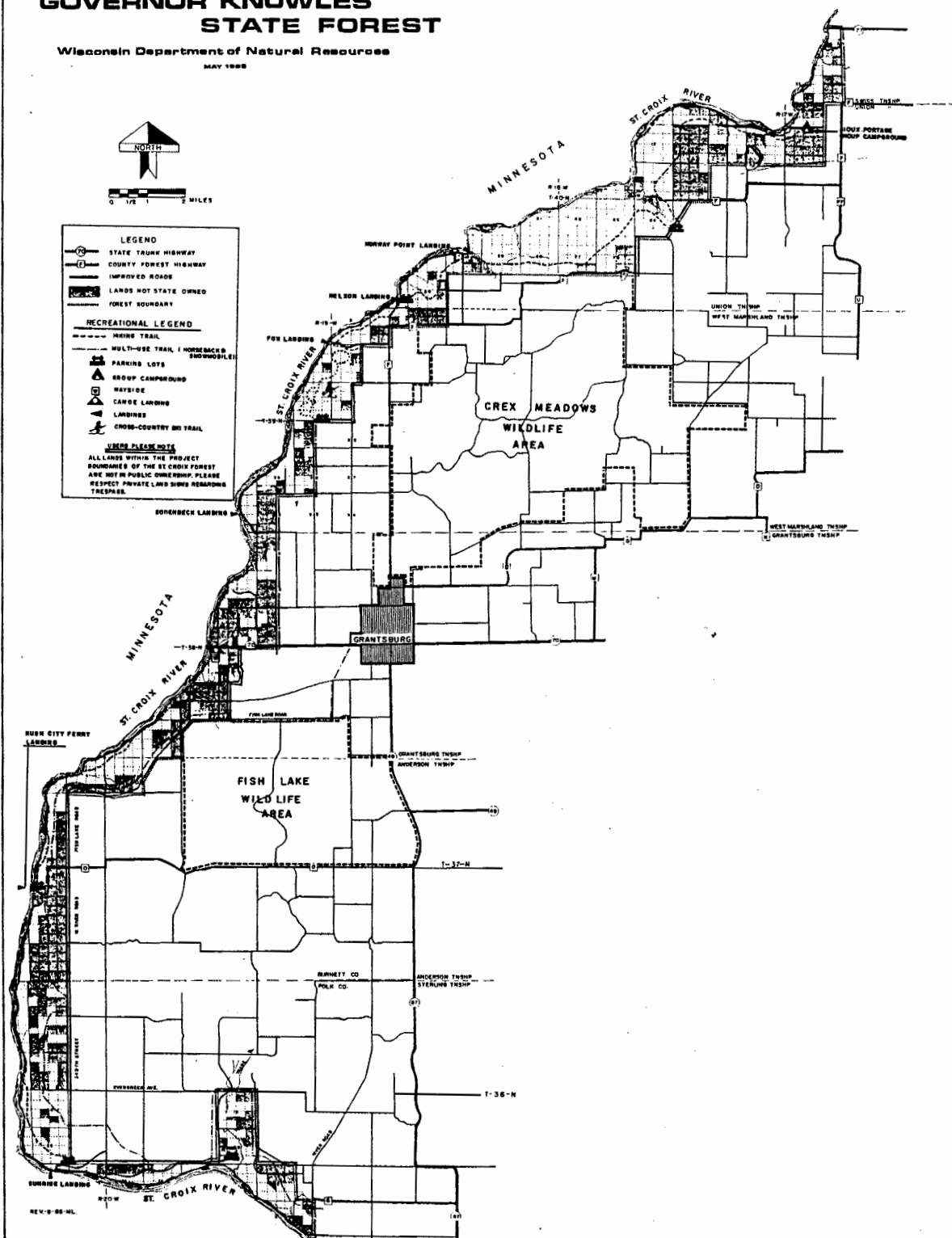
5. Resource Protection Areas: Under this plan the forest has 9,054 acres in which no timber management is permitted. This amounts to 31.0% of the State Forest. Removing 180 acres from the annual allowable cut would reduce the volume harvested by 2,700 cord equivalents, which is about \$16,200 of forest income annually.

A reduction in these areas would allow management activities which may be visible from the river. Scientific areas would have less buffer protecting values for which they were designated. An increase in wilderness areas would provide a larger study area.

6. Land Acquisition: An increase in the property boundary would protect more lands from development. Public sentiment does not presently favor this possibility. An accelerated acquisition program with increased funding and manpower, to reach the acreage goal quicker, would protect land under state management sooner. A reduction in property boundaries or a reduction in land purchases could be implemented. This would continue the present areas of poor blocking which results in inefficient management and conflicts with recreational activities. Lands with high natural resource values would be lost to private management and development.



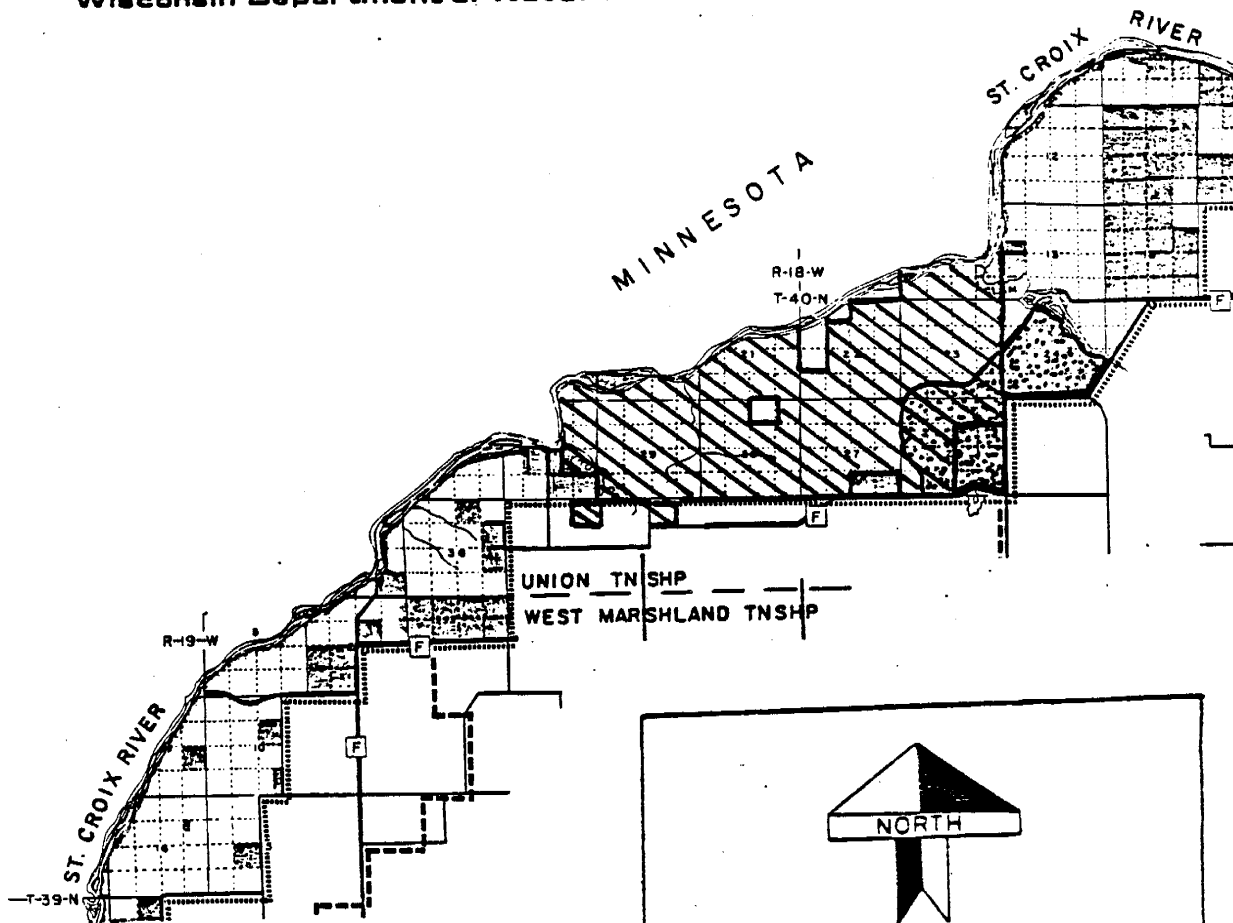
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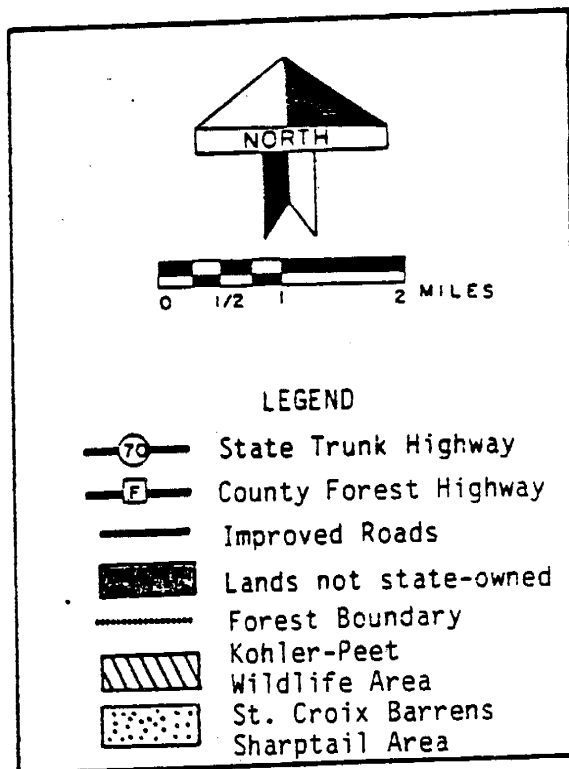


# GOVERNOR KNOWLES STATE FOREST

Wisconsin Department of Natural Resources



Old Kohler-Peet Wildlife Area  
St. Croix Barrens Sharptail Area



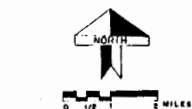


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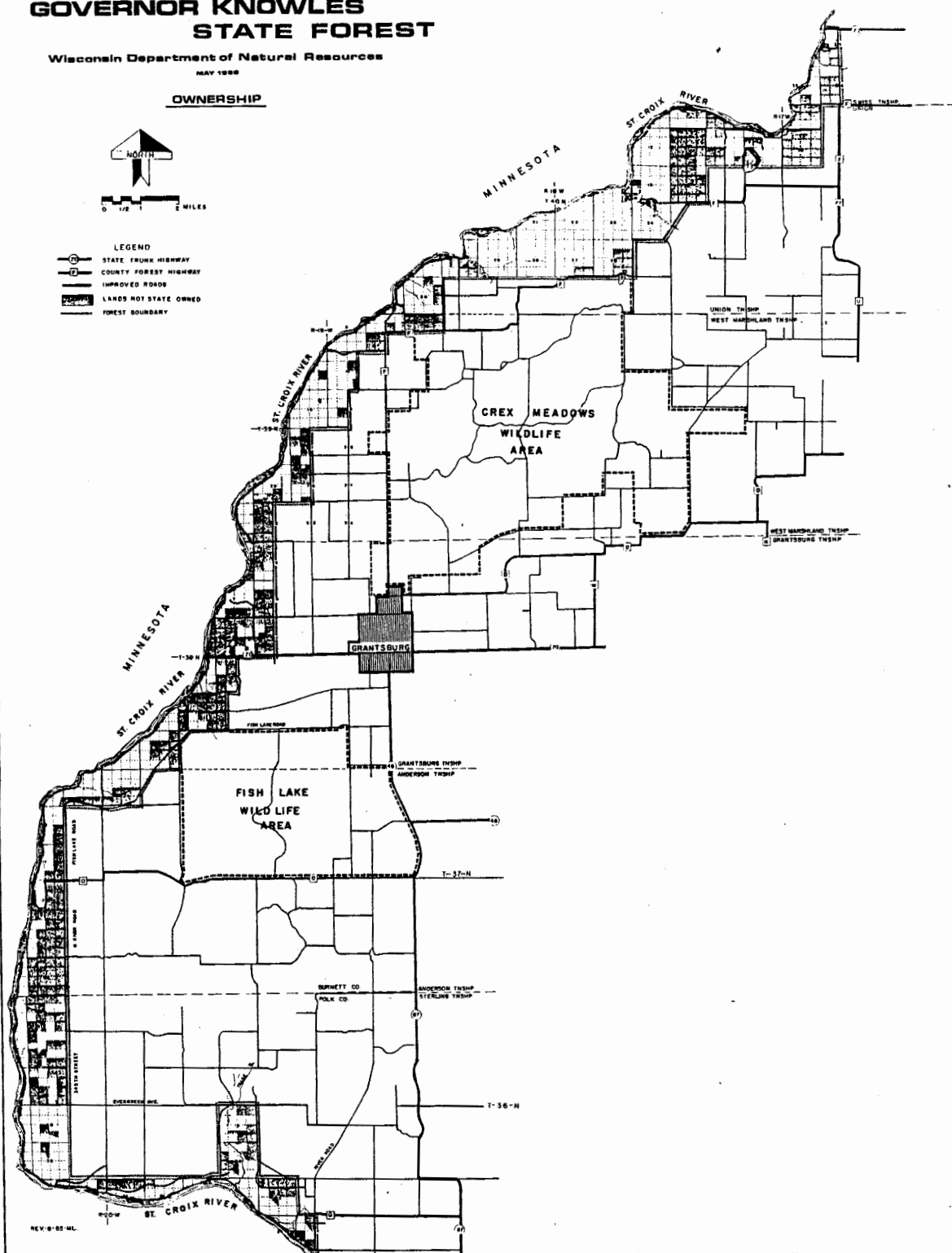
Wisconsin Department of Natural Resources

MAY 1988

## OWNERSHIP



- LEGEND
- STATE TRUNK HIGHWAY
  - COUNTY FOREST HIGHWAY
  - IMPROVED ROADS
  - LANDS NOT STATE OWNED
  - FOREST BOUNDARY

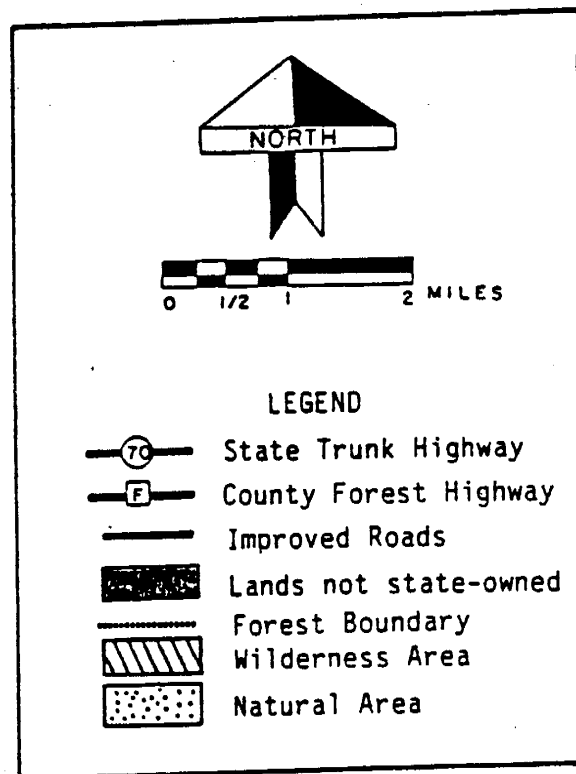
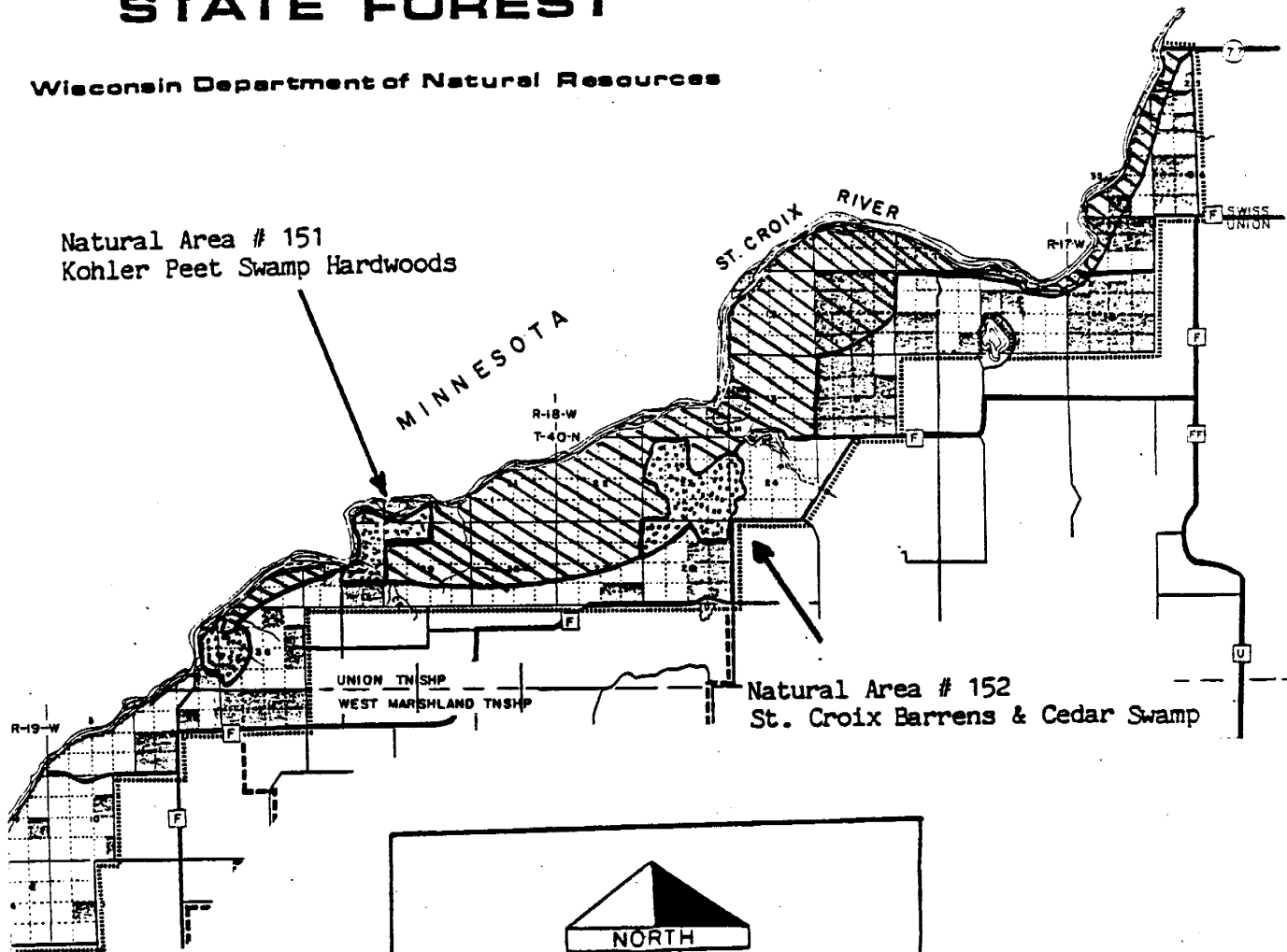






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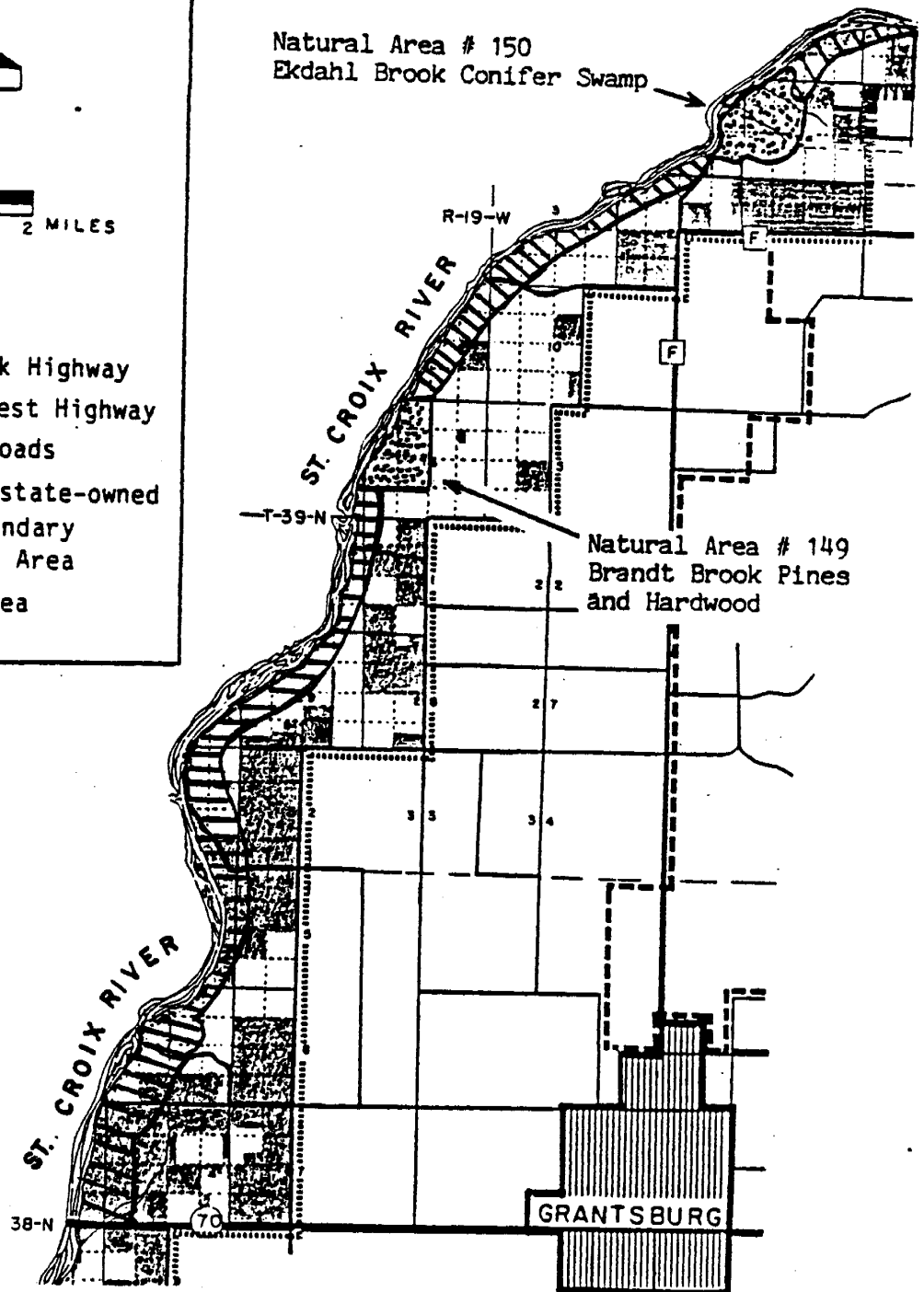
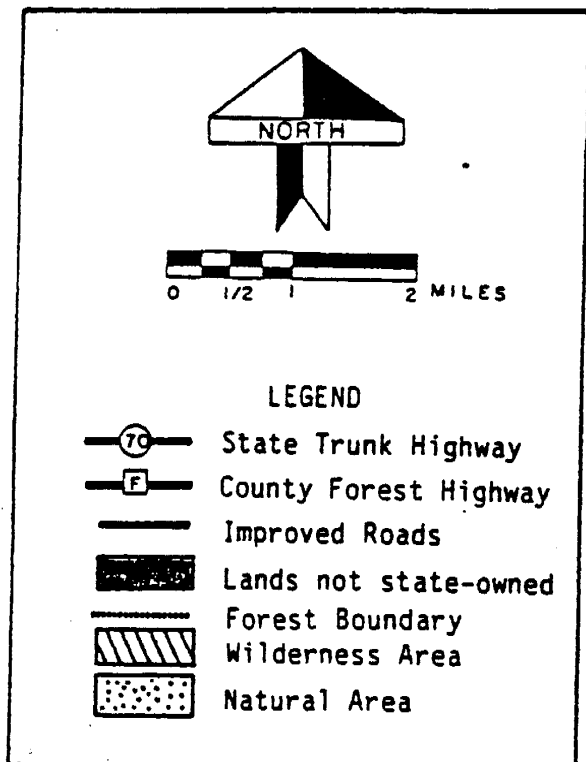
Wisconsin Department of Natural Resources





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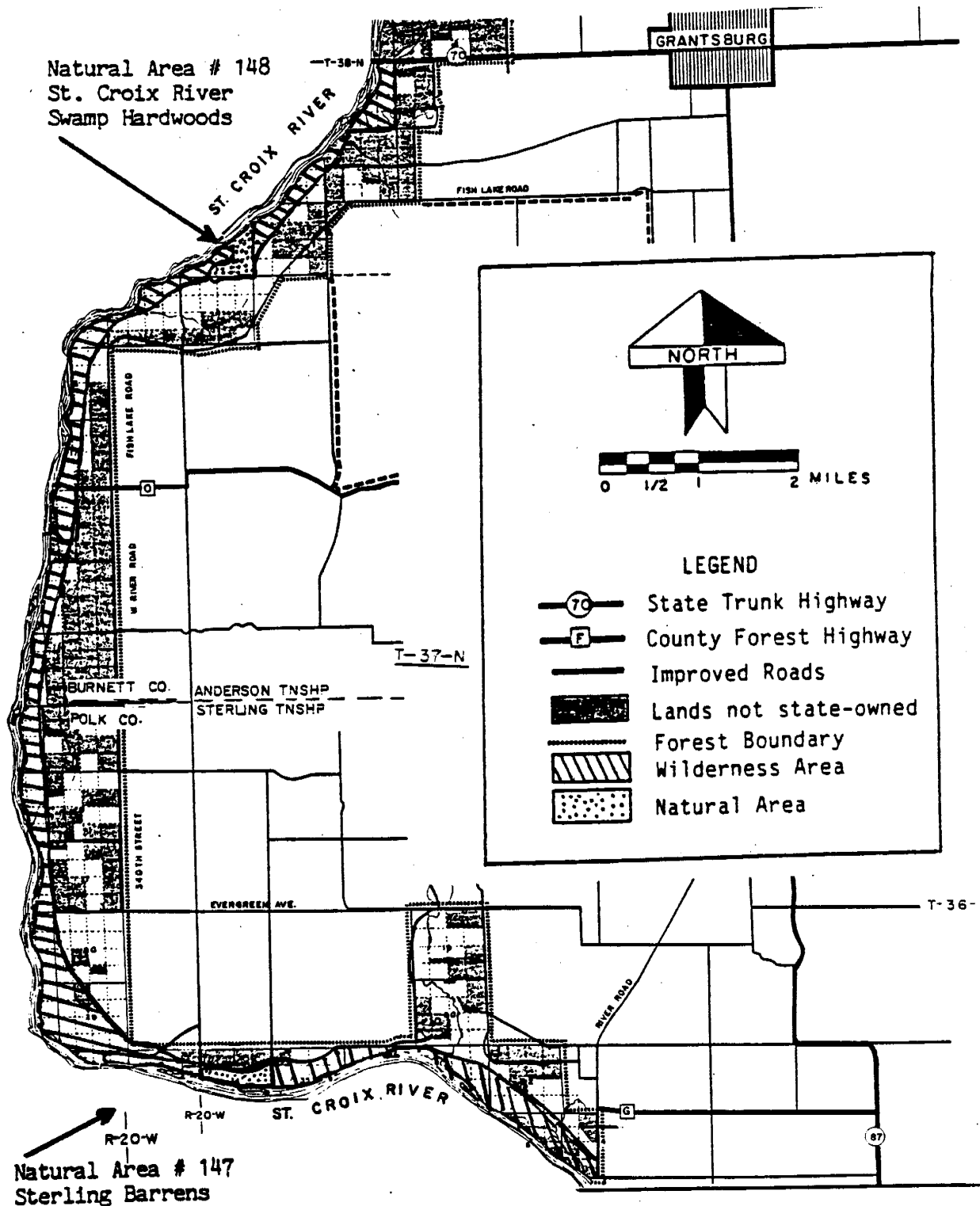
Wisconsin Department of Natural Resources





# GOVERNOR KNOWLES STATE FOREST

Wisconsin Department of Natural Resources





Appendix V. List of Common and Scientific Names of Fish Species Found in the Governor Knowles State Forest

<u>Common Name</u>	<u>Scientific Name</u>
LAMPREYS	
Chestnut lamprey	<u>Ichthyomyzon castaneus</u>
STURGEONS	
Lake sturgeon	<u>Acipenser fulvescens</u>
TROUT	
Brook trout	<u>salvelinus fontinalis</u>
Brown trout	<u>Salmo trutta</u>
MUDMINNOWS	
Central mudminnow	<u>Umbra limi</u>
PIKES	
Northern pike	<u>Esox lucius</u>
MINNOWS AND CARP	
Longnose dace	<u>Rhinichthys cataractae</u>
Blacknose dace	<u>Rhinichthys atratulus</u>
Common shiner	<u>Notropis cornutus</u>
Spotfin shiner	<u>Notropis spilopterus</u>
Bigmouth shiner	<u>Notropis dorsalis</u>
Central stoneroller	<u>Campostoma anomalum</u>
Brassy minnow	<u>Hybognathus hankinsoni</u>
Fathead minnow	<u>Pimephales promelas</u>
Creek chub	<u>Semotilus atromaculatus</u>
Hornyhead chub	<u>Nocomis biguttatus</u>
Bluntnose minnow	<u>Pimephales notatus</u>
Common carp	<u>Cyprinus carpio</u>
SUCKERS	
Silver redhorse	<u>Moxostoma anisurum</u>
Golden redhorse	<u>Moxostoma erythrurum</u>
Northern hog sucker	<u>Hypentelium nigricans</u>
White sucker	<u>Catostomus commersoni</u>
Shorthead redhorse	<u>Moxostoma macrolepidotum</u>
BULLHEAD CATFISH	
Stonecat	<u>Noturus flavus</u>
Yellow bullhead	<u>Ictalurus natalis</u>
Channel catfish	<u>Ictalurus punctatus</u>

Common Name

Scientific Name

CODFISH

Burbot

Lota lota

SUNFISH

Pumpkinseed

Lepomis gibbosus

Bluegill

Lepomis macrochirus

Black crappie

Pomoxis nigromaculatus

Rock bass

Ambloplites rupestris

Largemouth bass

Micropterus salmoides

Smallmouth bass

Micropterus dolomieu

PERCH

Gilt darter

Percina evides

Logperch

Percina caprodes

Yellow perch

Perca flavescens

Walleye

Stizostedion vitreum vitreum

Johnny darter

Etheostoma nigrum

SCULPINS

Mottled sculpin

Cottus bairdi

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## STATE FOREST ACCOMPLISHMENT REPORT

## GOVERNOR KNOWLES STATE FOREST

YEAR	TOTAL LAND OWNERSHIP (ACRES)	INCOME FROM COMPLETED TIMBER SALES	INCOME FROM OTHER FOREST PRODUCTS	TOTAL FOREST MANAGEMENT INCOME	TOTAL RECREATIONAL INCOME	TOTAL FOREST INCOME	ACRES OF SITE PREPARATION	TREE PLANTING NEW ACRES
1970	0	0	0	0	0	000		
1971	0	0	0	0	0	0	0	0
1972	2953	0	0	0	0	0	0	0
1973	6231	0	0	0	0	0	0	0
1974	7157	0	0	0	0	0	0	0
1975	11110	0	0	0	0	0	0	0
1976	12267	0	0	0	0	0	0	0
1977	13075	0	0	0	0	0	0	0
1978	13727	10151.93	0	10151.93	0	10151.93	0	132
1979	14225	21547.17	0	21547.17	0	21547.17	0	22
1980	14381	9203.16	0	9203.16	0	9203.16	0	75
1981	15008	26314.06	36	26350.06	0	26350.06	13	13
1982	15426	11608.03	20	11628.03	0	11628.03	217	7
1983	17747	15129.11	550	15679.11	0	15679.11	176	72
1984	18210.57	9213.63	145	9358.63	48	9406.63	183	183
1985	18277.24	34354.49	1392.5	35746.99	31	35777.99	210	210
1986	18622.24	10929.56	887.4	11816.96	102.2	11919.16	182	154
TOTAL		148451.14	3030.9	151482.04	181.2	151663.24	981	868

YEAR	ACRES OF TREE REPLANTING	ACRES OF DIRECT SEEDING	TOTAL CULTURAL OPERATIONS	NUMBER OF TIMBER SALES CLOSED	ACREAGE OF TIMBER SALES	MBF SAWTIMBER HARVESTED	CORDS OF PULPHOOD	TOTAL CORD EQUIVALENT
1970	0	0	0	0	0	0	0	0
1971	0	0	0	0	0	0	0	0
1972	0	0	0	0	0	0	0	0
1973	0	0	0	0	0	0	0	0
1974	0	0	0	0	0	0	0	0
1975	0	0	0	0	0	0	0	0
1976	0	0	4	0	0	0	0	0
1977	0	0	5	0	0	0	0	0
1978	0	100	4	1	110	292	27	724
1979	11	110	93	4	362	380	1197	2123
1980	0	0	50	6	211	0	1114	1114
1981	0	1	0	11	341	3	2889	2892
1982	0	162	0	5	148	0	1030	1030
1983	0	104	0	14	360	0	3808	3808
1984	0	0	0	7	146	0	1453	1453
1985	0	0	15	14	382	2.5	5658	5664
1986	0	0	70	6	139	0	1974	1974
TOTAL	11	477	241	68	2199	677.5	19150	20782

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GOVERNOR KNOWLES STATE FOREST

Public Informational Meeting Re: Master Plan Revision

Grantsburg High School Auditorium

May 29, 1985

Meeting was opened by Mike Giles at approximately 7:10 p.m. About 25 people were present. Introductions were made and presentations were given by:

Phil Wallace  
Tom Beard  
Paul Kooiker  
John Wickland  
Bob Hartshorn  
Mike Giles

Following questions were asked by the audience:

1. Is 3 or 4 wheeler and dirt bike use being encouraged by the DNR? If so, the DNR should be willing to help the township with the cost of maintaining roads.
2. How many places are there to camp along the St. Croix River with toilet facilities? (Answered - 4 or 5 spots)
3. What is the plan regarding the recreational land on the Highway 70 bridge? (This is only in the thinking stage at this time.)
4. How far up is the Trade considered a trout stream? (5.5 miles - there are very few trout when the Trade comes into Burnett County.)
5. How many acres does the DNR own in Polk County? (Approximately 15,093)
6. How much land inside the forest boundary is yet to be acquired? (At this time about 70% of the land inside the forest boundary is publicly owned.)
7. Does "Intensive Recreational Development" mean the horse camp at Trade River? (Yes)
8. Will the hiking trail be closed if the Wilderness Area expands up to the escarpment line? (No)
9. Will the proposed horse trail be policed by the State? (There was considerable discussion about legal and illegal use of ATV's, dirt bikes, and horses.)

10. Are horses permitted on the hiking trail? (At this time they are not, according to Code.)
11. A member of the audience expressed concern about large parties taking place at the campground at the end of County "O" - Old Rush City Ferry. (It was mentioned that this area is under the protection of the National Park Service.)
12. Will the old access roads through the escarpment to the River be closed? Will Foxes Landing access be closed? (There is no plan to close it at present.)
13. What is the procedure for abandoning or closing an access to the river? (An access across private land can be changed from drive-in to walk-in, but to completely abandon an access requires a hearing.)

The Grantsburg Rod & Gun Club representative Doug Goldman presented their petition with 291 signatures, supporting land use reclassification from Wilderness Area to Forest Production Area.

Mike thanked the Rod & Gun Club for their support and then closed the meeting asking that, if there are additional concerns or suggestions, people would please write them down and send them to him.

(Meeting was also taped)



RECEIVED

AUG 04 1988

*Growth Fund*

*Income Fund*

*Money Fund*

BUREAU OF FORESTRY

August 2, 1988

Mr. J. M. Frank,  
Director of Forestry  
Department of Natural Resources  
Box 7921  
Madison, WI 53707

Dear Mr. Frank:

I have now completed my review of the Master Plan and wish to make the following comments:

The concept element appears to be in accordance with the original proposal and continues to protect the natural beauty of the St. Croix River as part of the National Scenic Waterway. I do not believe it was ever envisioned that this park would be utilized for many public purposes, but would only permit the maintenance of the esthetic qualities of the forest and the river. I have been familiar with this territory since my boyhood days and have hunted and fished along the St. Croix from Solon Springs to the Grantsburg Bridge on Highway 70. These were great float trips and fishing for small mouth bass, walleye pike and northerns was excellent. I owned an interest in a cabin at the Clam River Dam and shot deer in the Kohler Peet Swamp just across the river. It was originally great territory for ducks, partridge and some geese. This, I hope, will be preserved in its natural condition for future generations to enjoy as much as I have during my lifetime.

I think that the implementation element needs some comment. There is no plan as far as I can see for the acquisition of the lands as they become available. If the limit is 300 acres per year the park will not become a reality during my lifetime, and certainly not in this century. I believe some specific program need be developed to plan for acquisition of lands that may become available and that the DNR should develop some fund raising mechanism whereby funds could be raised and contributions to be used for this specific purpose. I am not entirely clear from the Master Plan what areas are counted as the 7,348 wilderness area, 1,706 acres of which are natural areas and which of the 2,984 are considered maximum preserve zone in connection with the scenic riverway. The program further does not specify whether easements and deeds with restrictions as to uses for protection of the scenic beauty with a dedication provision might be considered in developing this program such as done by the Nature Conservancy. I would hope that some thought might be given to development of a specific program which I might help implement during my lifetime. I understood when the DNR made the original proposal that this acquisition plan was to be promoted by use of ORAP funds and now I learn that the formula developed during my administration under the ORAP plan has been repealed by the 1987 Legislature. If so, I want to express my disappointment and hope that the DNR has some available funds through LACON or the Fish and Wildlife Restoration Act.

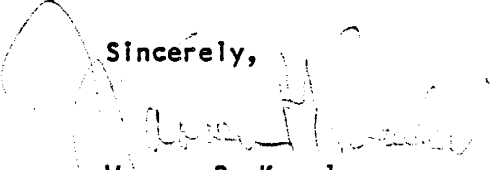
330 East Kilbourn Avenue • Two Plaza East, Suite 1150 • Milwaukee, Wisconsin 53202  
414/347-1141 800/242-7229 (Wisconsin) 800/247-7039 (Nationwide)

Mr. J. M. Frank  
Director of Forestry  
August 2, 1988  
Page Two

Please give this your consideration. I would be pleased to receive the final draft and your specific comments.

With best wishes.

Sincerely,



Warren P. Knowles

WPK/br

GOVERNOR KNOWLES STATE FOREST

MASTER PLAN REVIEW AND SUBSEQUENT COMMENTS

1. Bureau of Endangered Resources

Comment: Add list of special status species found in St. Croix River.  
Add information that southern brook lamprey was found in Wood River.

Response: Information added to plan. This was appreciated.

2. Bureau of Fisheries Management

Comment: Fishery interests are well represented. References to facilities accessible to the handicapped should be made.

Response: A paragraph in reference to accessibility has been added in the recreation section.

3. Bureau of Research

Comment: Wildlife research people generally conclude the plan is well done. Perhaps forest cover type acreages should be shown for both the regulated and unregulated areas. This may perhaps put a different perspective on management alternatives.

Response: When field reconnaissance data is collected for the Wilderness Area, it will be added to the master plan.

4. Bureau of Wildlife Management

Comment: Generally well written. Goals and objectives need work. The wildlife management objective is clearly focused on hunting and trapping. Observation should be an additional benefit.

Forestry will improve wildlife conditions and should be noted.

Response: Wildlife objective changed. Added wildlife observation as an additional benefit. For purposes of the plan, forestry and wildlife are discussed separately, although it is generally understood that many forestry activities are beneficial to wildlife.

5. National Park Service

Comment: Our impression of the overall document is that it is greatly improved over the original.

Part of the ski trail runs on NPS property as part of a cooperative agreement.

Response: So noted in plan.

Comment: Horseback riding should be outside the maximum preservation zone.

Response: Agreed.

Comment: There needs to be a sign for the Sioux Portage group camp. If river users can use, the sign should indicate the distance to designated sites, any fees, and the fact that it is only open to preregistered groups. NPS should be contacted about the sign.

Response: Good idea. So noted in plan and it will be implemented.

6. Town of Swiss

Comment: The Town's concern is where will the campgrounds and trails be located. There are quite a number of campgrounds and resorts in the Danbury area and it was felt that it's hard enough for them to make a living without having to compete with the state. The board feels that if the Governor Knowles Park would remain wild and primitive in the Swiss Township there would be no objections.

Response: There are no plans for development in the Danbury area.



